

04-30-04



U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

**INFORMATION DISCLOSURE  
STATEMENT**

Docket Number:  
10746/33A

Application Number  
10/775,806

Filing Date  
February 9, 2004

Examiner  
Not Yet Assigned

Art Unit  
Not Yet Assigned

Title  
SEMICONDUCTOR OPTICAL DEVICE AND  
THE FABRICATION METHOD

Applicant(s)  
Susumu KONDO et al.

Address to:  
Commissioner for Patents  
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- In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 35 U.S.C. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the following references to the attention of the Examiner. These references are listed on the attached modified PTO Form No. 1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom. The filing of this Information Disclosure Statement and the enclosed PTO Form No. 1449, shall not be construed as an admission that the information cited is prior art, or is considered to be material to patentability as defined in 37 C.F.R. § 1.56(b).
- Copies are enclosed of each patent, publication or other information listed on the modified PTO Form 1449 marked with an asterisk. Otherwise, copies of each patent, publication or other information listed on the modified PTO Form 1449 are not enclosed since they were previously cited by or submitted to the Patent Office in a prior application, Serial No. 10/124,835, which is relied upon for an earlier filing date under 35 U.S.C. 120.
- It is believed that no fees are due in connection with this Information Disclosure Statement. However, should any fees be due, the Commissioner is authorized to charge Deposit Account No. 11-0600 for such fees. A duplicate copy of this communication is enclosed for charging purposes.

Dated: 4/28/2004

By: 

Aaron C. Deditch (Reg. No. 33,865)

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	ATTY. DOCKET NO. 10746/33A	U.S. SERIAL NO. 10/775,806
	APPLICANT(S) Susumu KONDO et al.	
	FILING DATE February 9, 2004	GROUP Not Yet Assigned

#### U. S. PATENT DOCUMENTS

Page 1 of 2

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS	SUBCLASS	FILING DATE
	*6,539,039 B2	March 25, 2003	Yuji Furushima			
	*2003/0042495 A1	March 6, 2003	Matsuyuki Ogasawara et al.			
	*2003/0067010 A1	April 10, 2003	Ryuzo Iga et al.			

#### FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	9-214045	August 15, 1997	Japan			X	
	61-290790	December 20, 1986	Japan			X	
	8-250806	September 27, 1996	Japan			X	
	10-22579	January 23, 1998	Japan			X	
	197 47 996 C1	October 17, 1997	Germany				X

#### OTHER DOCUMENTS

EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	Y. Toyoda, K. Wakita, "Phase Evaluation of Tensile Strained Quantum Well Modulators", Extended Abstracts (The 62 <sup>nd</sup> Autumn Meeting, 2001); The Japan Society of Applied Physics, September 2001, 1 page and English translation.
	S. Kondo, Y. Noguchi, K. Tsuzuki, M. Yuda, S. Oku, Y. Kondo, "Ru-doped Semi-Insulating InP buried InGaAlAs/InAlAs MQWs modulators", Extended Abstracts (The 62 <sup>nd</sup> Autumn Meeting, 2001); The Japan Society of Applied Physics, September 2001, 1 page and English translation.
	T. Suzuki, J.H. Noh, T. Asakawa, Y. Miyagi, K. Tada, "Electroabsorptive characterization of five layer asymmetric coupled quantum well", Extended Abstracts (The 62 <sup>nd</sup> Autumn Meeting, 2001); The Japan Society of Applied Physics, September 2001, 1 page and English translation.
	S. Kondo, Y. Noguchi, K. Tsuzuki, M. Yuda, S. Oku, Y. Kondo, H. Takeuchi, "Ruthenium-doped semi-insulating InP buried InGaAlAs/InAlAs MQWs modulators, 13 <sup>th</sup> IPRM May 2001, pp. 19-20.

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

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EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	D. Soderstrom et al., "Electrical Characterization of Ruthenium-Doped InP Grown by Low Pressure Hydride Vapor Phase Epitaxy", Electrochemical and Solid-state Letters, 4(6) G53-G55 (2001).
	D. Soderstrom et al., "Dopant Diffusion and Current-Voltage Studies on Epitaxial InP Codoped with Ru and Fe", Journal of Electronic Materials, Vol. 30, No. 8, pp. 972-976 (2001).
	D. Soderstrom et al., Studies on Ruthenium-Doped InP Growth by Low-Pressure Hydride Vapor-Phase Epitaxy", Journal of Electrochemical Society, 148 (7) G375-G378 (2001).
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	A. Dadgar et al., "Growth of Ru doped semi-insulating InP by low pressure metalorganic chemical vapor deposition.", Journal of Crystal Growth 195 (1998), pp. 69-73.
	A. van Geelen et al., "Ruthenium Doped High Power 1.48 $\mu$ m Siph Laser", 11 <sup>th</sup> International Conference on Indium Phosphide and Related Materials, May 1999, pp. 203-206.

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